

CLAIMS

1. Method of transmitting messages for resetting a bus (3) and associated topology information, across a transparent bridge (4), to other buses,
5 connected to the first bus by the said bridge, connected on the one hand to the bus and on the other hand to the network affording the said transparent bridge (4), characterized in that, during a series of reset messages, the said bridge head (1) selects the intermediate reset messages that it transmits to the other buses interconnected on the said
10 bridge.
2. Method according to Claim 1, characterized in that only the intermediate reset messages caused by an alteration in the direction of change of the number of nodes in the network are transmitted.
- 15 3. Method according to Claim 2, characterized in that it comprises the steps of:
 - storing the number of nodes (2) of the bus connected to the bridge head (1) and setting to zero an index of change of the number of
20 nodes connected to the said bus (E1),
 - on receipt of a reset message (E2), comparing the new number of nodes connected to the said bus (D1),
 - if the number of nodes does not alter, the reset message is not transmitted (E3),
 - 25 - if the number of nodes is increasing whereas it was stable (E2) or was already increasing, the intermediate reset message is not transmitted (E4, E3),
 - if the number of nodes is decreasing whereas it was stable or was already decreasing (D3), the intermediate reset message is not
30 transmitted (E5, E3),
 - in other cases, the reset message is transmitted (E6), then we return to the first step (E1).
- 35 4. Method according to Claim 1, the nodes of the network using a given method for the phase of recognition of the network after reset, characterized in that, the decision to transmit the reset, from the bus from which it originates to the other buses connected by the bridge, is

taken as a function of the result of the application of the said method to the topology transmitted with the said reset.

5. Method according to Claim 4, characterized in that it comprises the steps of:

- storing the initial topology of the bus connected;
- on receipt of a reset, termed intermediate, storing of the associated topology without transmitting the said reset;
- calculating and storing the result of the said intelligent method applied to the initial topology and to the new intermediate topology received;
- on receipt of a new reset, calculating and storing the result of the said intelligent method applied to the initial topology and to the new topology received;
- comparing the results given by the said intelligent method on the intermediate topology and the last one received;
- transmitting the reset and the intermediate topology in the case of different results;
- if the results are identical, the last topology becomes the intermediate topology;
- a timeout ensuring the transmission of the last topology received after a given time.

6. Method according to Claim 1, characterized in that it simulates the disconnecting of the entire bus generating the reset with the exception of the bridge head.

7. Method according to Claim 6, characterized in that it comprises the steps of:

- on receipt of a first reset, transmitting this reset accompanied by topology information simulating the disconnecting of the bus behind the said bridge head;
- thereafter, all the intermediate resets, except the last one, which arise in a given time are ignored, this timeout being reset with each receipt of a new reset message;
- transmitting this last reset and associated topology information.

8. Method according to one of the preceding claims where the buses are IEEE 1394 buses.
- 5 9. Device comprising a network interface connected to a bus and a network interface connected to another network, equipped with means of selective transmission of reset messages coming from the bus.
10. Device according to Claim 9 where the bus is an IEEE 1394 bus.